

## ABSTRACT

A pitch-based carbon fiber sliver providing a high-strength carbon fiber spun yarn is efficiently produced by providing a pitch-based carbon fiber mat comprising a mass of piled-up pitch-based 5 carbon fibers of which fiber extension directions are aligned preferentially in one direction; and directly subjecting the carbon fiber mat to drawing and carding by means of a carding machine while moving the mat in said one preferential alignment direction. The thus-obtained carbon fiber sliver is drawn and twisted to produce a 10 pitch-based carbon fiber spun yarn containing at least 3 wt.% of fibers having a fiber length of at least 150 mm, a number of primary twist of 50 - 400 turns/m and a tensile strength of at least 0.10 N/tex.